



Cisco MDS 9222i Switch and 18/4-Port Module Hardware Release Notes

For Installation in a Sun™ Storage Area Network

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Cisco MDS 9222i Switch and 18/4-Port Module Hardware Release Notes

Read this document so that you are aware of the requirements and issues that can affect the installation and operation of the Cisco Multilayer DataCenter Switch (MDS) 9222i Multiservice Modular Switch (MDS 9222i) and Cisco MDS 18/4-port Multiservice Module (MSM-18/4) hardware in a Sun storage area network (SAN).

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This document contains the following sections:

- [“Product Features” on page 2](#)
- [“Supported Software” on page 2](#)
- [“Supported Hardware” on page 5](#)
- [“Downloading and Installing Patches” on page 8](#)
- [“Related Documentation” on page 9](#)
- [“Service Contact Information” on page 9](#)

Product Features

The MDS 9222i switch integrates Fibre Channel (FC) and IP (FCIP) storage services in a single system to allow maximum flexibility in user configurations. The MDS 9222i switch has eighteen 4-Gbps FC ports, four 1-Gigabit Ethernet IP storage services ports, and a modular expansion slot. The MSM-18/4 module contains the same number of ports and same functionality in blade form.

The MDS 9222i switch and MSM-18/4 module IP ports are not compatible with the IP ports on earlier switches and modules (IPS 4, IPS 8, 14+2 or 9216i).

The MDS 9222i switch and MSM-18/4 module have the following features:

- Up to 4 Gbps shared application throughput appliances
- Up to 16 tunnels per 4 ports, for both FCIP and iSCSI
- FCIP write and tape read/write acceleration

Supported Software

This section describes the software that can be used with the MDS 9222i switch and MSM-18/4 module, and contains the following topics:

- [“SAN-OS Firmware Requirements” on page 2](#)
- [“Operating System Requirements” on page 3](#)
- [“Supported Management Software” on page 4](#)
- [“Cisco Storage Media Encryption” on page 5](#)

SAN-OS Firmware Requirements

The correct SAN-OS firmware version is dependent on the equipment configuration:

- The MDS 9222i switch requires SAN-OS version 3.2(1a) (minimum). Version 3.2(2c) is recommended.
- When using the MSM-18/4 module, consult [TABLE 1](#) to determine the correct firmware patch ID for the switch into which you are installing the module.
- Cisco Storage Media Encryption (SME) requires SAN-OS version 3.2(2c) (minimum). See [“Cisco Storage Media Encryption” on page 5](#) for more information.

- Mainframe connections using FICON require SAN-OS version 3.2(2c) (minimum).

Note – SAN-OS 3.2(2c) is not qualified for channel extension with Cisco Visual Switch Manager (VSM) or any Sun StorageTek FICON tape drives. For FICON, ensure the channel extension feature is disabled when using SAN-OS 3.2(2c) with VSM or Sun StorageTek FICON tape drives.

TABLE 1 Recommended SAN-OS Versions and Patch IDs for Cisco Switches using MSM-18/4 Module

Switch / Director	SAN-OS Version	Patch ID
MDS9216	SAN-OS 3.2(2c)	126486-05
MDS9222i	SAN-OS 3.2(2c)	126489-02
MDS9513	SAN-OS 3.2(2c)	126485-05
MDS9506 (Supervisor 1)	SAN-OS 3.2(2c)	126484-05
MDS9509 (Supervisor 1)	SAN-OS 3.2(2c)	126484-05
MDS9506 (Supervisor 2)	SAN-OS 3.2(2c)	126485-05
MDS9509 (Supervisor 2)	SAN-OS 3.2(2c)	126485-05

See [“Downloading and Installing Patches” on page 8](#) for more information.

Operating System Requirements

The following operating systems running on hosts in the SAN are compatible with the MDS 9222i switch and MSM-18/4 module.

Solaris

- Solaris™ 9 Update 1 and higher for Sparc

- Solaris 10

Linux

- Red Hat Enterprise Linux 4 (IA32/AMD64)
- Red Hat Enterprise Linux 5 (IA32/AMD64)
- SuSE Linux 9 Professional Community Edition (IA32/AMD64)
- SuSE Linux 10 Professional Community Edition (IA32/AMD64)

Microsoft Windows

- Windows Server 2000 (IA32)
- Windows Server 2003 (IA32/AMD64)

Other

- HP/UX Version 11.0, 11i
- IBM AIX Version 5.3

Supported Management Software

You can manage the MDS 9222i switch and MSM-18/4 module using any of the following software management tools:

- Application programming interface (API) for integration with third-party and user-developed management tools
- Cisco Fabric Manager
- Cisco MDS 9000 family CLI
- Cisco Quick Configuration wizard

See [“Related Documentation” on page 9](#) for further information.

Cisco Storage Media Encryption

Cisco MDS 9000 Family Storage Media Encryption (SME) encrypts data at rest on heterogeneous tape devices and virtual tape libraries. SME is completely integrated with the Cisco MDS 9000 family of switches and Cisco Fabric Manager, enabling highly available encryption services to be deployed and managed without rewiring or reconfiguring SANs, or installing additional software.

A Cisco MDS 9000 SME license is required to enable SME on an MDS 9222i switch or MSM-18/4 module. The SME license is self-contained in that no other licenses are needed to run SME on an MDS 9222i switch or MSM-18/4 module. SME requires a Fabric Manager server for configuration, but does not require a Fabric Manager server license.

There are three types of SME licenses:

- A license for enabling SME on an MSM-18/4 module contained within an MDS 95xx chassis
- A license for enabling SME on an MSM-18/4 module contained within an MDS 92xx chassis
- A license for enabling SME on an MDS 9222i switch.

See [“SAN-OS Firmware Requirements” on page 2](#) for SME firmware requirements and other firmware requirements for your configuration.

Supported Hardware

The MDS 9222i switch and MSM-18/4 module are compatible with the following storage platforms, HBAs, and host server platforms. The list applies only to the MDS 9222i switch and MSM-18/4 module hardware. It does not apply to the Cisco SME software specifically.

This section contains the following topics:

- [“Supported Storage Platforms” on page 5](#)
- [“Supported Host Bus Adapters” on page 6](#)
- [“Supported Server Platforms” on page 6](#)

Supported Storage Platforms

The MDS 9222i switch and MSM-18/4 module are compatible with the following storage platforms:

- Sun StorEdge™ 3510, 3511 FC arrays
- Sun StorEdge 9910, 9960, 9970, 9980, 9985, and 9990
- Sun StorEdge Fibre Channel 9840B/C, 9940B, T10K, LTO 3/4, SDLT 600, SDLT4 tape drives
- Sun StorEdge FC420 FC-SCSI Bridge for L25 and L100 tape libraries with the SG-XFCCARD2-C LVD SCSI to Fibre Channel Card Quantum or the SG-XFC420CARD-MOD Fibre Channel / LVD Internal Bridge
- Sun StorEdge T3B array with full fabric
- Sun StorageTek™ 6140 and 6540 arrays
- Sun StorageTek FlexLine™ 380 array
- C4 tape library with the SG-XFCCARD2-C LVD SCSI to Fibre Channel Card Quantum
- FC Robots: L180/700/1400, SL500

Supported Host Bus Adapters

The MDS 9222i switch and MSM-18/4 module are compatible with the following HBAs:

- SG-XPCI2FC-QF2 and SG-XPCI2FC-QF2-Z
- SG-XPCI1FC-QL2
- SG-XPCI1FC-QLC and SG-XPCI1FC-QLC-Z (Maximum of two cascaded switches between devices)
- SG-XPCI1FC-EM2 and SG-XPCI2FC-EM2
- SG-XPCI1FC-QF4 and SG-XPCI2FC-QF4
- SG-XPCIE1FC-QF4 and SG-XPCIE2FC-QF4
- SG-XPCI1FC-EM4-Z and SG-XPCI2FC-EM4-Z
- SG-XPCIE1FC-EM4 and SG-XPCIE2FC-EM4
- SG-XPCIE2FC-QB4-Z (Sun Blade™ 6000 & 8000 Modular System only)
- SG-XPCIE2FC-EB4-Z (Sun Blade 6000 & 8000 Modular System only)
- SG-PCIE20FC-NEM-Z (Sun Blade 8000 Modular System only)

Supported Server Platforms

The MDS 9222i switch and MSM-18/4 module are compatible with the following Sun servers.

x64/x86 Systems

- Sun Blade 6000 & 8000 Modular System
- Sun Fire™ V20/40z
- Sun Fire x2100 and x4100/4200 (M2)
- Sun Fire x2200 and x4600

SPARC Servers

- Sun Blade 1500/2500
- Sun Blade 2500+
- Sun Enterprise™ 4900/6900
- Sun Fire T1000/T2000
- Sun Fire V1280/Netra 1280
- Sun Fire Netra 240
- Sun Fire V210/V240/V250
- Sun Fire V245
- Sun Fire V440
- Sun Fire V445
- Sun Fire V480
- Sun Fire V490
- Sun Fire V880
- Sun Fire V890
- Sun Fire V1280/Netra 1280
- Sun Fire 4800/4810/6800
- Sun Fire 12k/15k/20k/25k

Windows 2003 Server

- Sun Blade 6000 & 8000 Modular System

Red Hat Enterprise Linux and SuSE Linux Enterprise 9 Servers

- Sun Blade 6000 & 8000 Modular System

Downloading and Installing Patches

The following tasks provide instructions for downloading and installing patches for the MDS 9222i switch and MSM-18/4 module. See “[SAN-OS Firmware Requirements](#)” on page 2 for the required or recommended firmware versions and associated patch IDs.

Downloading Patches

1. Access the SunSolveSM web site at:

<http://sunsolve.sun.com>

2. Read and accept the terms and conditions of the License Agreement.

3. From the Support category, select Patches and Updates.

4. Under PatchFinder, type the patch ID and click Find Patch.

Do not type the -xx revision number. PatchFinder automatically finds the latest patch.

5. Verify that you have retrieved the correct patch.

6. Print the page.

Printing this page also prints the patch README file, which contains the installation instructions, special instructions, special guidelines, and notes.

7. Download the patch by clicking on either HTTP or FTP as shown in the following line:

Download Patch (*nn,nnn,nnn* bytes) HTTP FTP.

8. Click PatchFinder and repeat the process from Step 4 for each patch.

Installing Patches

When you are finished downloading all the patches, install the patches by following the instructions in each patch README file.

Related Documentation

Cisco documentation is equipment-specific and can be obtained directly from Cisco's web site.

- For documentation related to Cisco MDS 9200 Series Multilayer Switches:

http://cisco.com/en/US/products/ps5988/tsd_products_support_series_home.html

- For documentation related to Cisco MDS 9500 Series Multilayer Directors:

http://cisco.com/en/US/products/ps5990/tsd_products_support_series_home.html

Service Contact Information

If you need help installing or using this product in the United States, call 1-800-USA-4SUN, or go to:

<http://www.sun.com/service/contacting/index.xml>

